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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,677	03/30/2001	Kurt James Korkowski	STL9563	6119

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EXAMINER

DAVIS, DAVID DONALD

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 12/07/2004

22

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,677

Applicant(s)

KORKOWSKI ET AL.

Examiner

David D. Davis

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-11 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5, 6, 8, 10, 11, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) 7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 18.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2652

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 18-28 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

- I. Claims 5-11 and 16-17, drawn to a method of reducing a flow-induced disturbance on an actuator arm of a disk drive, classified in class 360, subclass 97.02.
- II. Claims 18-28, drawn to a turbulence attenuation device, classified in class 360, subclass 97.03.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, process for using, a method of reducing a flow-induced disturbance, as claimed can be practiced with another materially different product such as a device utilizing a tube and not a shroud.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Art Unit: 2652

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18-28 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 5, 6, 8, 10, 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (US 4,001,889) in view of Walsh (US 3,731,291). Schneider shows in figure 1 an actuator arm of a disc drive. However, Schneider is silent as to a method of or mechanism for reducing a flow-induced disturbance on the actuator arm of the disk drive.

Art Unit: 2652

Regarding claim 5, Walsh shows in figure 1 a method of reducing a flow-induced disturbance in a disc drive, which includes transducer assemblies 18 and recording heads. Figure 1 shows redirecting a portion of a tangential gas flow generated by a rotation of a first disc 11 of the disc drive along a surface and toward an inner diameter. Regarding claim 6, disc 11 of Walsh has a nominal radius R and in which the surface defines a channel 26, 28 and 31 and is considered to include a radius of curvature greater than $R/100$. Regarding claim 8, figure 1 of Walsh also shows that the redirected portion of the gas flow combines with the rest of the tangential gas flow upstream.

Regarding claim 10, Walsh discloses the redirected portion of the gas flow and is considered to have a velocity that is at least 50% of the tangential gas flow velocity. Regarding claim 11, disc 11 of Walsh has a nominal radius R in which the channel forms a lateral width considered greater than $R/100$. Regarding claim 16, Walsh has a second disc, as shown in figure 5, configured for co-rotation with the first disc with the surface of element 63, for example, does not extend into a space between the first and second discs.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the disk drive of Schnieder having an actuator arm with a method of or mechanism for reducing a flow-induced disturbance on the actuator arm as taught by Walsh. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide the disk drive having an actuator arm with a method of or mechanism for reducing a flow-induced disturbance on the actuator arm so as to exert less force on the actuator, as well as, clean the air inside the disk drive.

Art Unit: 2652

Assuming arguendo that the channel does not have a radius of curvature greater than $R/100$ or a lateral width greater than $R/100$, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the channel of Walsh with a radius of curvature greater than $R/100$ and/or a lateral width greater than $R/100$. The rationale is as follows: the purpose of the channel is to redirect the gas flow. The channel need not have a radius of curvature greater than $R/100$ or a lateral width greater than $R/100$ to redirect the airflow. Realizing this, one of ordinary skill in the art at the time the invention was made would have been motivated to provide the channel with a radius of curvature greater than $R/100$ or a lateral width greater than $R/100$, which is well within the purview of a skilled artisan and absent an unobvious result, to achieve a specific predetermined airflow to optimal exert less force on the actuator, as well as, clean the air inside the disk drive.

Assuming arguendo that the redirected portion of the gas flow does not have a velocity that is at least 50% of the tangential gas flow velocity, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the redirected portion of the gas flow of Walsh with a velocity that is at least 50% of the tangential gas flow velocity. The rationale is as follows: the purpose of the channel is to redirect the gas flow. The channel need not have at least 50% of the tangential gas flow velocity to redirect the gas flow. Realizing this, a one of ordinary skill in the art at the time the invention was made would have been motivated to have a redirected portion of the gas flow with a velocity that is at least 50% of the tangential gas flow velocity, which is well within the purview of a skilled artisan and absent an unobvious result, to achieve a specific predetermined airflow to optimal exert less force on the actuator, as well as, clean the air inside the disk drive.

Art Unit: 2652

Allowable Subject Matter

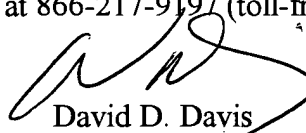
7. Claims 7, 9 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is (703) 308-1503. The examiner can normally be reached on Monday thru Friday between 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David D. Davis
Primary Examiner
Art Unit 2652

ddd